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July 29, 2014

Steve Rank
Executive Director of Safety and Health
Ironworkers International Union
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Dear Mr. Rank

Thank you for your letter of July 28, 2014 with questions regarding electronic transmission (radio or hard-wire phone) of verbal crane signals during the steel erection process. The regulation referenced in your letter, 1926.1421, is the Federal OSHA regulation. In California, the regulation which applies is Title 8 Section 1617.3. Signals - Voice Signals - Additional Requirements. The language in the California regulation is nearly identical to the Federal OSHA regulation:

§1617.3. Signals - Voice Signals - Additional Requirements.

(a) Prior to beginning operations, the operator, signal person and lift director (if there is one), shall contact each other and agree on the voice signals that will be used. Once the voice signals are agreed upon, these workers need not meet again to discuss voice signals unless another worker is added or substituted, there is confusion about the voice signals, or a voice signal is to be changed.

(b) Each voice signal shall contain the following three elements, given in the following order: (1) function (such as hoist, boom, etc.); (2) direction, approximate distance and/or speed; (3) function, stop command.

(c) The operator, signal person and lift director (if there is one), shall be able to effectively communicate in the language used.

The following are the questions contained in your letter followed by my response:

Question #1: Does the DOSH Research and Standards Unit uphold the above referenced standard that all parties must "agree on the voice signals that will be used?"

Response #1: Yes, Section 1617.3(a) requires that the crane operator, signal person and lift director (if there is one) to agree upon voice signals prior to beginning crane operations.

Question #2: Does the DOSH Research and Standards Unit recognize the potential hoisting and rigging safety hazards as described above, and agree that the commencement of steel erection activities must be halted until such time that all parties comply with the above referenced standard and "agree on the voice signals that will be used"?

Response #2: Conducting crane operations without agreed upon voice signals presents a serious safety hazard to employees if employees are:

- 1) in the vicinity of the load,
- 2) in the vicinity of any object which may be struck by the load
- 3) on or in the vicinity of a structure which may be struck by the load.

Miscommunication between the signal person and crane operator can lead to the load being moved in the wrong direction. Misdirection of the load can kill or seriously injure employees through any of the following means:

- 1) Employees may be hit by the load or pinned between the load and another object.
- 2) An object struck by the load may break apart or fall and strike employees.
- 3) A structure impacted by the load may move abruptly and unexpectedly and eject employees on the structure.
- 4) Objects may be ejected from a structure impacted by the load and strike employees.
- 5) A structure impacted by the load may break apart or collapse endangering employees on or around the structure.

In accordance with Title 8 Section 1671.3, crane operations can not proceed until voice signals are agreed upon.

Question #3: Can the DOSH compliance personnel issue a citation to any party who refuses to comply with the above referenced standard and refuses to agree with standard voice crane signals?

Response #3: Yes, the Division of Occupational Safety and Health will issue citations to employers who violate 1617.3.

Question #4: Given the nature of potential crane hoisting and rigging hazards during the steel erection process, could DOSH issue an "Order Prohibiting Use" (OPU) until all parties agree with the above referenced standard and agree on the use of standard voice crane signals?

Response #4: California Labor Code Section 6325 governs the issuance of an OPU:

When, in the opinion of the division, a place of employment, machine, device, apparatus, or equipment or any part thereof is in a dangerous condition, is not properly guarded or is dangerously placed so as to constitute an imminent hazard to employees, entry therein, or the use thereof, as the case may be, shall be prohibited by the division, and a conspicuous notice to that effect shall be attached thereto. Such prohibition of use shall be limited to the immediate area in which the imminent hazard exists, and the division shall not prohibit any entry in or use of a place of employment, machine, device, apparatus, or equipment, or any part thereof, which is outside such area of imminent hazard. Such notice shall not be removed except by an authorized representative of the division, nor until the place of employment, machine, device, apparatus, or equipment is made safe and the required safeguards or safety appliances or devices are provided. This section shall not prevent the entry or use with the division's knowledge and permission for the sole purpose of eliminating the dangerous conditions.

If crane operations at a worksite were proceeding without agreed upon voice signals between the crane operator and signal person in violation of 1617.3, the Division of Occupational Safety and Health would evaluate the hazard to employees caused by the crane and load.

- 1) The Division would determine the necessity and importance of a signal person in accordance with Title 8 Section 1617.1 which requires a qualified signal person in following situations:
 - a. The point of operation, meaning the load travel or the area near or at load placement, is not in full and direct view of the operator.
 - b. When the equipment is traveling, the view in the direction of travel is obstructed.
 - c. Due to site-specific safety concerns, either the operator or the person handling the load determines that it is necessary.

- 2) The Division would determine if incorrect movement of the load could seriously injure or kill any employee at the worksite as discussed in Response #2. The Division would take into account the size and weight of the load as well as the position of employees relative to the load or any object or structure which could be struck by the load and impact employees.

If the Division determined that a signal person was required pursuant to Section 1671.1, there was an existing violation of 1617.3 due to failure of an agreement on voice signals, and incorrect movement of the load could seriously injure or kill an employee, the Division would consider the situation an imminent hazard and issue an OPU. The OPU would be lifted once there was agreement on voice signals.

Thank you for your interest in occupational safety and health. Please feel free to contact me if you have any questions

Sincerely,



Eric Berg
Acting Principal Safety Engineer
Research & Standards Development Safety Unit